droppings. The surrounding area was grassland cropped short by sheep. As I remember, there were two or three small gatherings and a photograph taken at the time shows a group of ten. All except two of the ten were relatively close to each other and it is impossible to say for certain whether all were male.

The small tortoiseshell appears to have a similar habit, but my evidence is only circumstantial. On several occasions I have disturbed odd ones from seepages around middens or where effluent is collected from the silage clamp and slurry store in the farmyard at home. These observations have been mainly in spring and usually, though not always, well away from dandelion and red dead-nettle which seem to be their only source of nectar at that time. An alternative explanation of course, could be that the bare earth or concrete in these situations is a suitably sheltered spot for sunbathing, but on one occasion there was a red admiral and that was in dappled shade.

P. O. WINTER, West End Farm, Muston, Filey, North Yorkshire, YO14 0ES.

NOTES ON THE BRITISH SPECIES OF DIORYCTRIA, ZELL. (LEP.: PYRALIDAE) — The currently accepted status of the genus *Dioryctria* is admirably stated by Goater, 1986 (*British Pyralid Moths*), and can be briefly summarised as follows:

abietella D. & S. Larva lives in a cone or occasionally in pith and dead shoots of *Pinus sylvestris.*

mutatella Fuchs. Genitalia of this and preceding species similar and rather variable. Small but constant differences in size and markings. Taken together allow firm determination to be made. Larva also lives in *P. sylvestris*. Life histories of the two species not adequately differentiated.

schuetzeella Fuchs. Readily distinguished from the previous two species. Larva in *Picea abies* .

On 10th August 1985, Col. D. H. Sterling, B. R. Baker, Dr. R. Langmaid and P. H. Sterling collected growing cones of *P. abies*, which showed external signs of larval workings, from trees in Unhill Wood (v.c. 22). In addition to a single *Eupithecia abietaria* Goetz. and a number of *Cydia strobilella* L., a large number of specimens of *Dioryctria* species were bred, a few of which emerged in October 1985 (kept outdoors), and the majority in 1986 – all appeared to be *D. abietella*, but we were unhappy with this as all the British literature gave *Pinus sylvestris* as the only foodplant. (Goater *loc. cit*; Emmet, 1979, *A Field Guide to the Smaller British Lepidoptera*; Beirne, 1952, *British Pyralid and plume Moths*; Meyrick, 1927, *Revised Handbook of British Lepidoptera*). BRB made a genitalia preparation of a male, and passed it to Mr. Shaffer of the British Museum (Natural History), who confirmed that it appeared to be

abietella. Subsequently, DHS dissected a series of both sexes but was unable to find any constant differences between these and caught specimens previously identified as *abietella*, although it was impossible to know whether, as larvae, the caught specimens were associated with *Pinus abies* or *P. sylvestris*.

It is possible that *abietella* feeds on the cone of either *P. abies* or *P. sylvestris*. However, very few *P. sylvestris* feeders are known to have *P. abies* as an alternative foodplant. Of the 26 species listed in Emmet (*loc cit*) as feeding on *P. sylvestris*, only 3 are shown as also feeding on *P. abies*. BRB obtained several pairings from the bred *Dioryctria* but was unable to persuade them to lay on fresh sprigs of *P. sylvestris* bearing green cones. Further investigation is needed, but the following suggestions are advanced for consideration:

1. Although *P. abies* has never been recorded as a foodplant for *D. abietella*, both *P. sylvestris* and *P. abies* are acceptable foodplants.
2. There is a fourth British *Dioryctria* species closely related to the *P. sylvestris* feeding *abietella* and *mutatella*. but whose foodplant is *P. abies*.
3. *D. mutatella* feeds on *P. sylvestris* and *D. abietella* feeds on *P. abies*. As *D. mutatella* was not originally considered a "good" species, the larval habits of *D. abietella* f. *mutatella*, as it was earlier known, could have been correctly observed and described, but applied incorrectly to *D. abietella* as well as *D. mutatella* when the species were split.

It would be of value to compare genitalia and specimens of any presumed *D. abietella* actually bred from *P. sylvestris*, if such specimens are held in any collections. D. H. STERLING 2 Hampton Lane, Winchester, Hants. SO22 5LF.

PHRAGMATOBIA FULIGINOSA L. (LEP.: ARCTIIDAE) A POSTSCRIPT. — I am able to add some further observations in relation to my account of certain aspects of the life history of the ruby tiger (*Ent. Rec.* **98**:129). The fine specimens in the National Collection indicating the form found in the Orkney Islands are in fact not typical. Mr. R. I. Lorimer who donated them to the collection informs me that they were bred in captivity in the South of England, and may have included F2 generation moths. In early Autumn of 1986 Mr. Lorimer kindly sent me some full fed *fuliginosa* larvae from the Orkneys; some reluctantly pupated instead of hibernating as larvae and the resulting moths were typical *borealis* Staud., perhaps slightly darker than average – quite unlike the British Museum specimens which have now been suitably relabelled. B. Kettlewell (*The Evolution of Melanism*, 1973) notes that G. Harper had informed him that *borealis* offspring from Scotland which were forced at 70°F to emerge in Winter were markedly redder, approaching the